
Assistive Technology that is Readily Accessible

The assistive technology already available on your computer
will focus aiding those with minimal visual or reading challenges.



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The Mac® and Windows® accessibility options are similar, but are sometimes found under different names. This handout focuses on the step-by-step Assistive Technology for Windows®.

Text to Speech in Specific Programs On computers with Windows®

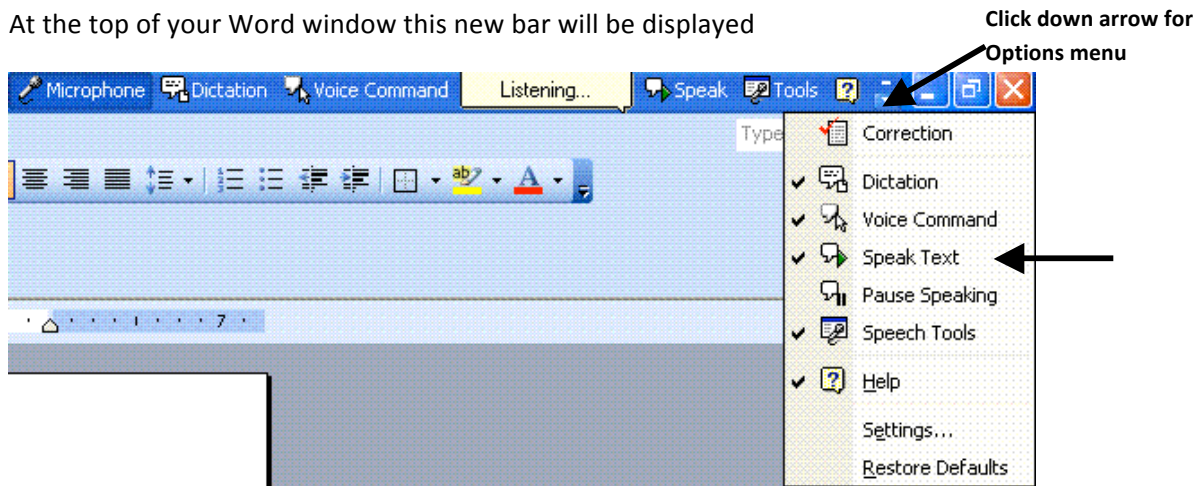
Microsoft Word 2003®




Note: It is not possible to read text on web pages but you could copy Web page text and paste it into Word.

Note: This option has been discontinued in Word 2007 but is still available in Excel 2007.

- Open **Word** (do this rather than open the Word document from within Internet Explorer from a web page link, so that the Word menu bar is displayed)
- → **Tools** → **Speech**
- The “Welcome to Speech Recognition” dialog box is displayed – click **Cancel**, then **OK** (Dictation/Speech Recognition options will be discussed in a later worksheet)


At the top of your Word window this new bar will be displayed

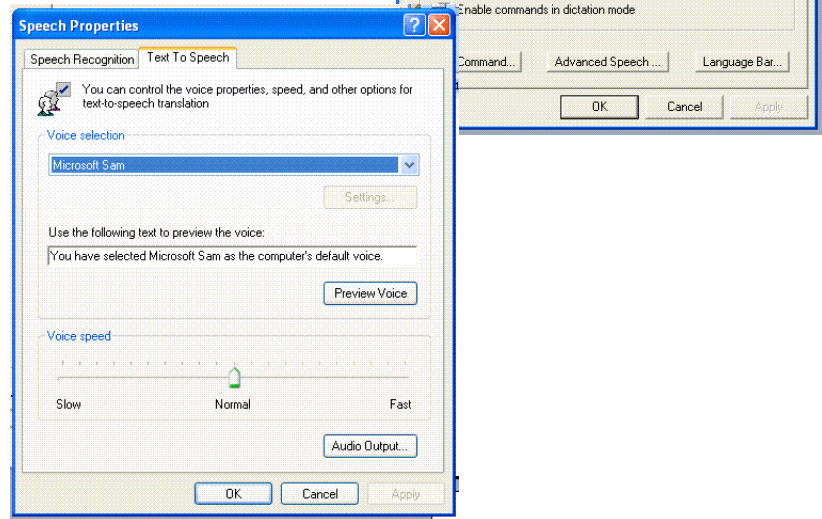


- You may need to add the **Speak Button**  to the bar; to do this click the Options menu
- Open the Word document to be read aloud. Position cursor where you wish to start.
- To start reading back the document from the cursor position, click **Speak**. 
- To stop reading, click **Stop**  on the Language Bar.



To change the type or speed of the voice used for reading back Word documents:

- On the Language Bar, click **Tools**  button, **Options...**
- Click **Advanced Speech...** button
- Click **Text to Speech** tab
- Use **Voice selection** to change voice used (there are 3 available)
- Use **Voice Speed** to adjust the speed



If you have an earlier version of Windows or Word (assuming you have sound capability):

You can install a special application to give you “text to speech” – for example:

- **ReadPlease** www.readplease.com will let you copy and paste the text you want read (from web, Word, .pdf doc) into ReadPlease document window before it can be read aloud
- **Read and Write** www.texthelp.com is more sophisticated and will help you with literacy, too.

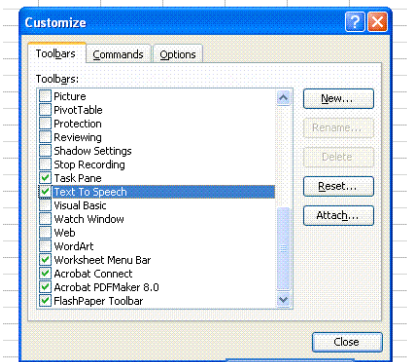


Microsoft Excel® 2003



You first need to get customize the toolbar for Text to Speech.

- **Customize your Language Bar -**
 - Click on → **Tools**
 - → **Customize**
 - → Choose the tab **Toolbars**
 - → Checkmark **Text to Speech**



This toolbar is created and floats on screen



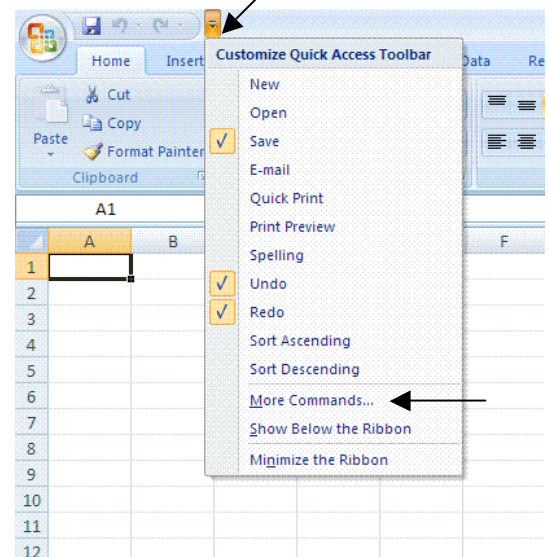
Microsoft Excel® 2007



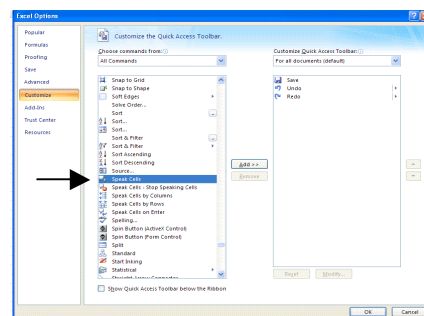
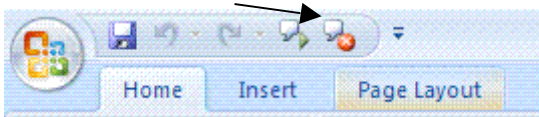
You first need to get customize the toolbar for Text to Speech.

- **Customize your Language Bar -**
 - Click on → **Quick Access Toolbar**
 - → **More Commands**
 - → Choose **All Commands**
 - Navigate down to **Speak Cells**
 - → **Highlight and Add it**
 - Navigate to **Speak Cells –Stop Speaking Cells**
 - → Highlight and Add it
 - Click **OK**
- **Reading Text**
 - The icons will show in the TOP LEFT hand corner.
 - Click on the cell you want read
 - Click on the **SPEAK ICON** and the text will be read for you.

Click on this drop down arrow for the Quick Access Toolbar



New toolbar looks like this



Visual Accessibility in Microsoft Word® or Excel®- On computers with Windows®

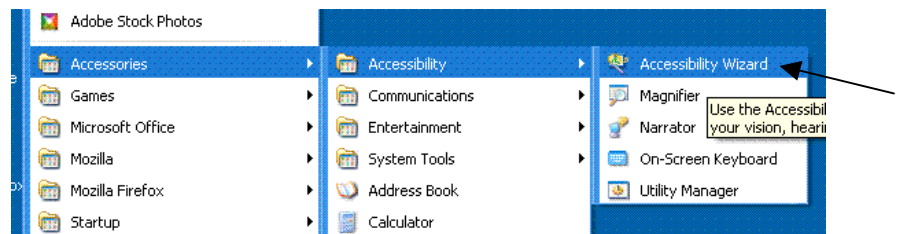
- Zooming in (enlarging text) → View → Zoom
- Enlarging Tool Bar → Tools → Customize → Options → Click on **Large Icons**



Accessibility Options for the Windows Operating System

Locating Accessibility Options in Windows

Click on **Start** → **Programs** → **Accessories**
→ **Accessibility**



1. Accessibility Wizard

Click on **Start** → **Programs** → **Accessories** → **Accessibility** → **Accessibility Wizard**

“This wizard helps you configure Windows for your vision, hearing, and mobility needs.”

Click next to go to **Change Display/Text Size** and choose one of three pre-configured options:

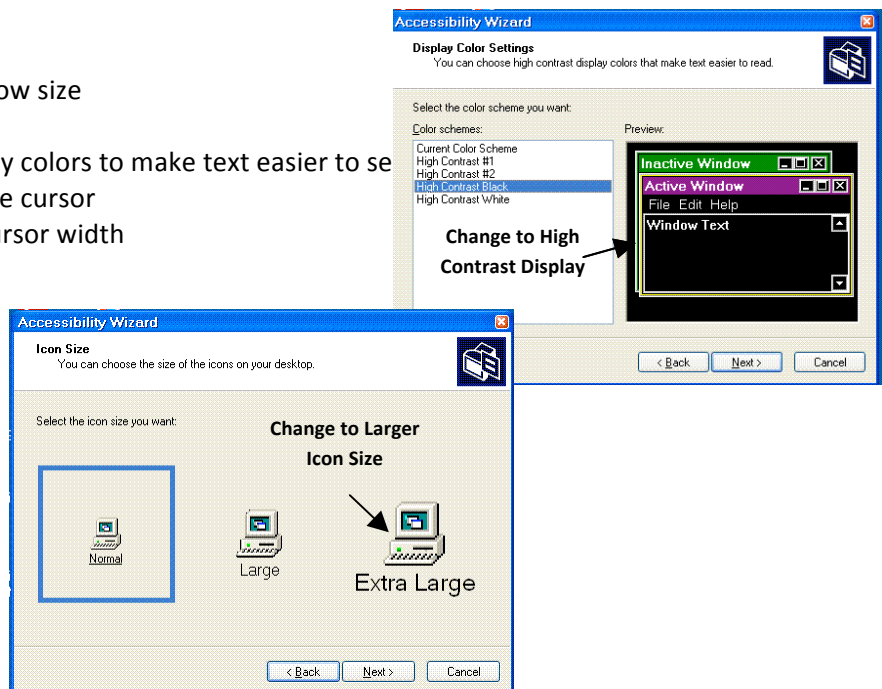
- Keep usual text size
 - Use large window titles and menus
 - Use Windows Magnifier and large titles and menus
- (Windows Magnifier opens a floating window that displays enlarged view of part of screen – see more information below)*



If you wish to configure your own options, click next and in the “**Set Wizard Options**” you can change **Impairment Specific Options** including:

Vision Options

- Change scroll bar and window size
- Increase icon size
- Choose high contrast display colors to make text easier to see
- Increase size/color of mouse cursor
- Change cursor blink rate/cursor width



Hearing Options

- Have visual warning of system event
- Have captions for speech and sounds

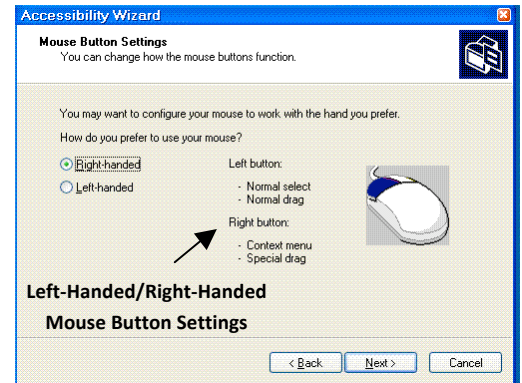
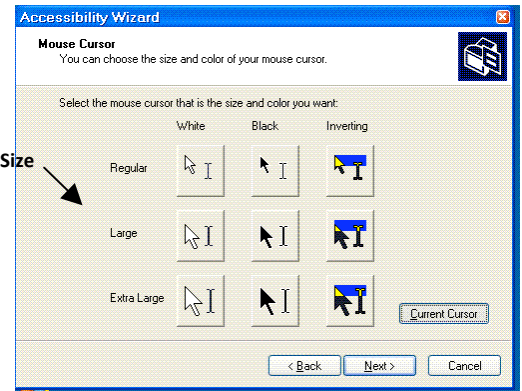
Mobility Options

- Do key combinations (like CTRL+ALT+DELETE) one key at a time
- Choose to have repeated keystrokes ignored
- Play sound when certain keys are pressed accidentally (CAPS LOCK, NUM LOCK, SCROLL LOCK)
- Choose to have extra keyboard help displayed
- Use numeric keypad instead of mouse
- Choose left-handed mouse instead of right-handed
- Change speed of mouse pointer

Administration Options:

- Make settings default so that it is on all the time (one user)
- Turn off for each new user

Change Cursor Size and Color



2. Narrator (Text to Speech)

To open Narrator, click **Start** → **Programs** → **Accessories** → **Accessibility** → **Narrator**.

Narrator reads what is displayed on your screen: the contents of the active window, menu options, or the text you have typed.

- Narrator is designed to work with Notepad, Wordpad, Control Panel programs, Internet Explorer, the Windows desktop, and Windows setup. Narrator may not read words aloud correctly in other programs.
- You can have new windows, menus, or shortcut menus read aloud when they are displayed.
- You can have typed characters read aloud.
- You can have the mouse pointer follow the active item on the screen.
- You can adjust the speed, volume, or pitch of the voice.

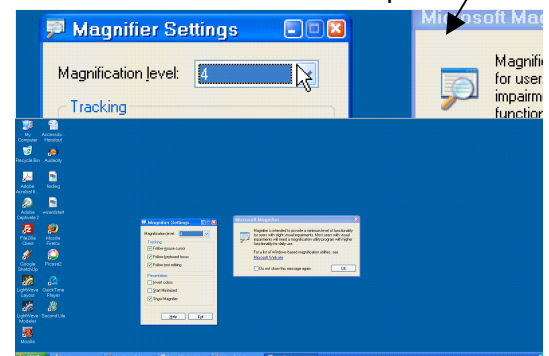
3. Window Magnifier

To open Magnifier, click **Start** → **Programs** → **Accessories** → **Accessibility** → **Magnifier**.

Magnifier creates a separate window that displays a magnified portion of your screen.

- You can change the color scheme of the magnification window for easier visibility.
- You can move or resize the Magnifier window, or drag it to the edge of the screen and lock it into place.

Opens a separate window on desktop



When using Magnifier, you can:

- Change the magnification level
- Change the size of the magnification window
- Change the position of the magnification window on your desktop
- Invert the screen colors

Magnifier also has a number of tracking options, including:

- Following the mouse pointer as it moves on your screen
- Following the keyboard focus which centers on the location of the cursor
- Following text editing

4. On-screen Keyboard

To open On-Screen Keyboard, click **Start → Programs → Accessories → Accessibility → On-Screen Keyboard**

Note: The program in which you want to type characters must be active while you are using On-Screen Keyboard.

On-Screen Keyboard is a utility that displays a virtual keyboard on the screen and allows users with mobility impairments to type data using a pointing device or joystick.



On-Screen Keyboard has **three typing modes** you can use to type data:

- In **clicking mode**, you click the on-screen keys to type text.
- In **scanning mode**, On-Screen Keyboard continually scans the keyboard and highlights areas where you can type keyboard characters by pressing a hot key or using a switch-input device.
- In **hovering mode**, you use a mouse or joystick to point to a key for a predefined period of time, and the selected character is typed automatically.

In On-Screen Keyboard you can also:

- View an enhanced keyboard that includes the numeric keypad, or a standard keyboard that does not include the numeric keypad.
- Use Click Sound to add an audible click when you select a key.
- Use Always on Top to keep your keyboard displayed on your screen when you switch programs or windows.



5. Utility Manager

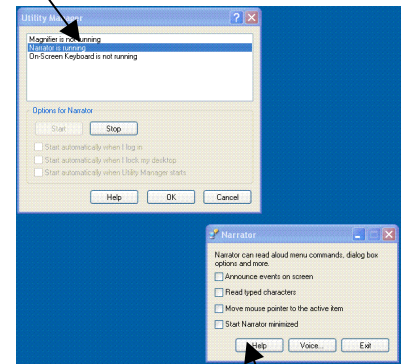
You can also open Utility Manager by clicking **Start → Programs → Accessories → Accessibility → Utility Manager**.

Note: You will have limited program management capabilities. You will only be able to start or stop accessibility programs from within Utility Manager.

Utility Manager enables users to check an accessibility program's status and start or stop an accessibility program.

- Users with administrator-level access can designate to have the program start when Utility Manager starts.
- The built-in accessibility programs available from the Utility Manager are Magnifier, Narrator, and On-Screen Keyboard.
- By default, Narrator starts when Utility Manager opens. This gives users who are blind or have impaired vision immediate access to Utility Manager.

Lists accessibility programs being used – can start or stop from here




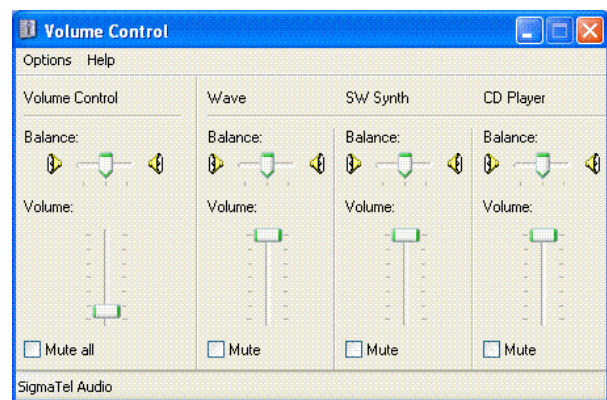
Narrator starts automatically when Utility Manager is used

You can also access many of these accessibility options by going to the **Control Panel** and clicking on **Accessibility Options**.



6. To adjust the volume:

- Double-click on the  **Speaker** icon bottom right on the Taskbar
- This will open the Volume Control Dialog box to allow you to adjust the volume



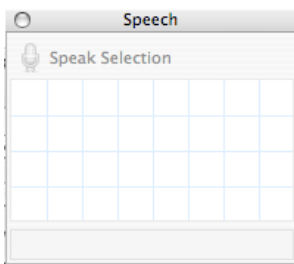
The Mac® and Windows® accessibility options are similar, but are sometimes found under different names. This handout focuses on the step-by-step Assistive Technology for Mac OS®.

Text to Speech in Specific Programs Mac OS®

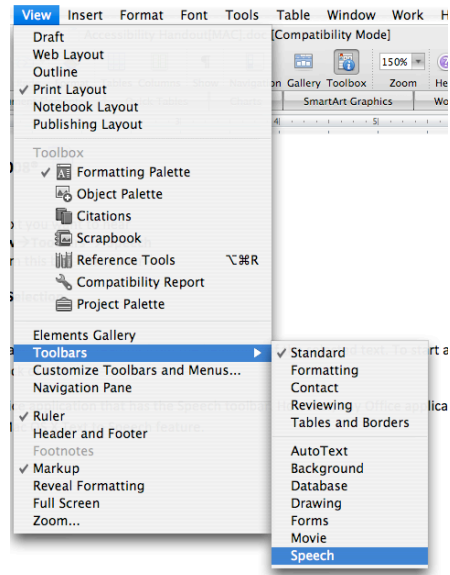
Microsoft Word 2008®



- Open **Word**
- Select the text you want to hear
- Click on **View→Toolbars→Speech**
At the bottom this box will appear:



- Click **Speak Selection**

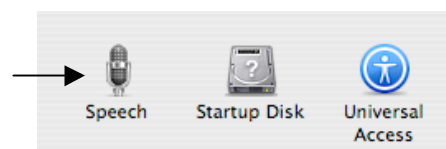
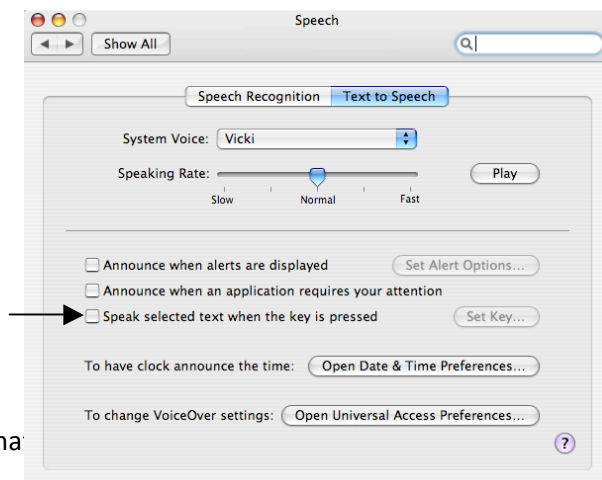
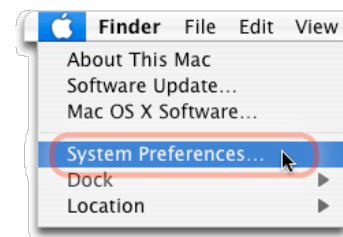


Hint: The computer always begins reading from the beginning of the selected text. To start at another location, select a different block of text.

Other Microsoft Office® Applications

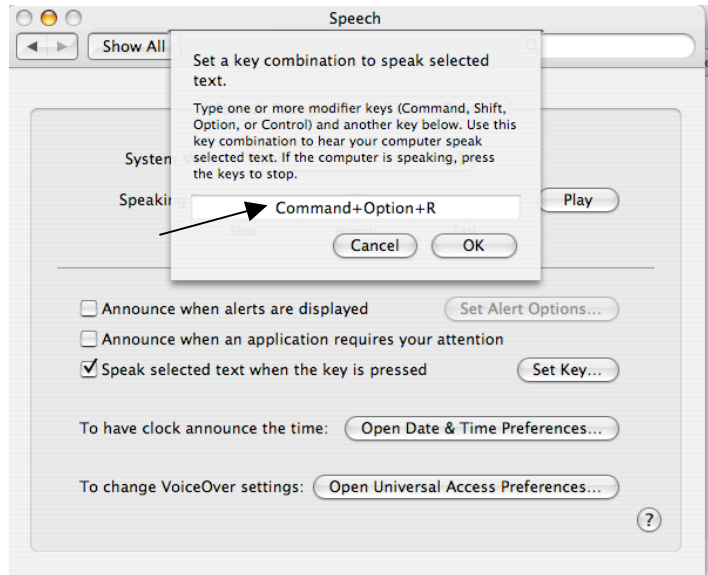
Word is the only Office application that has the Speech toolbar. However, any Office application can read text aloud by using the Mac OS X Text to Speech feature.

- On the **Apple** menu, click **Systems Preferences**
- Under **Systems**, click **Speech**
- On the **Text to Speech** tab, select the **Speak selected text when the key is pressed**



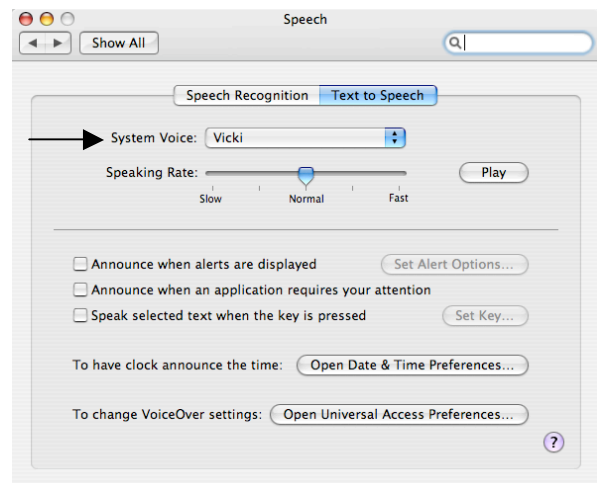
- Press the keyboard shortcut that you want to use to hear text read aloud (for example, ⌘+OPTION + R), and then click **OK**.
- In any Office Application, select some text and then press the keyboard shortcut to hear the text read aloud.

Note: To start or stop reading selected text aloud, press the Text to Speech keyboard shortcut that you created.



To change the type or speed of the voice used for reading back documents:

- On the **Apple** menu, click **Systems Preferences**
- Under **Systems**, click **Speech**
- On the **Text to Speech** tab, you can change the speaking rate, system voice and more.



Visual Accessibility in Microsoft Word® or Excel®

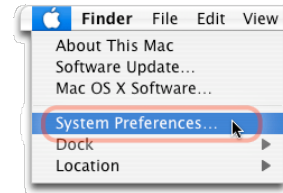
- **Zooming in (enlarging text)**
→ View → Zoom



Accessibility Options for the Mac OS Operating System

Locating Accessibility Options in Mac OS

- On the Apple menu at the top left of your screen, click **System Preferences**



or click on the icon on the dock



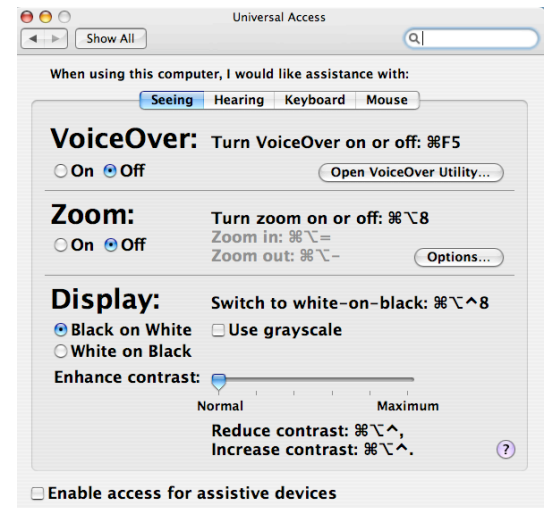
- Under System, click **Universal Access**.



Vision – Use Zoom for easier reading

- On the **Seeing Tab**, under **Zoom**, click **On**.
- To zoom in, press **⌘ + OPTION + =**
- To zoom out, press **⌘ + OPTION + -**
- To “toggle” the zoom feature on and off, use the keyboard shortcut **⌘ + OPTION + 8**

Note: This utility is useful for trainers who want to highlight a specific part of a window.



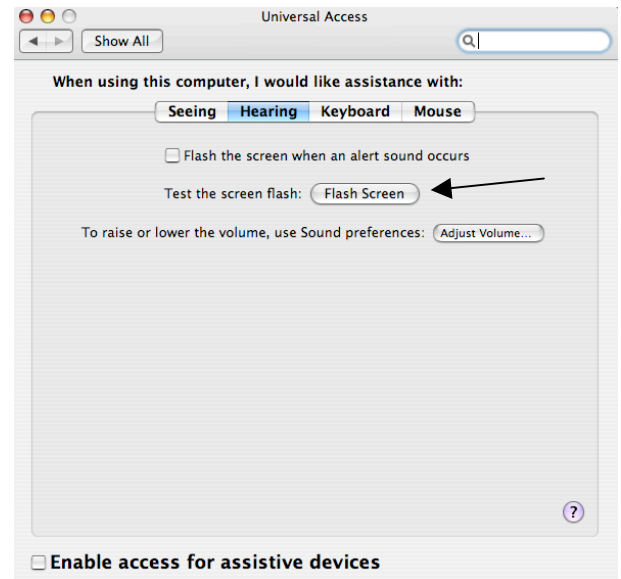
Vision – Change Display for easier reading

- On the **Seeing Tab**, under **Display**, you can enhance contrast and change to white on black.



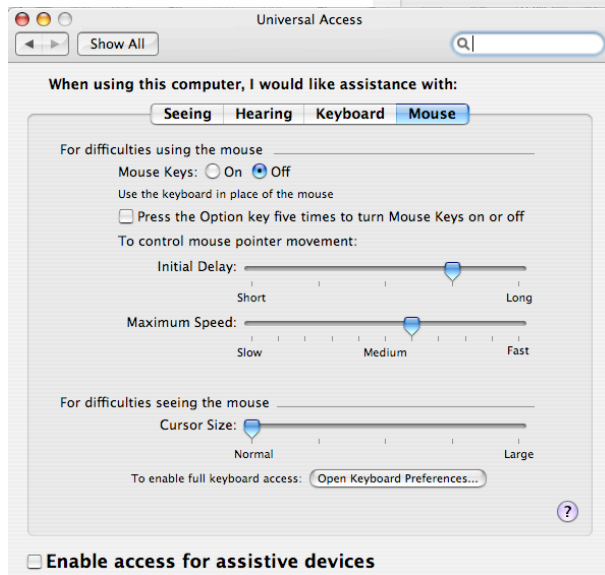
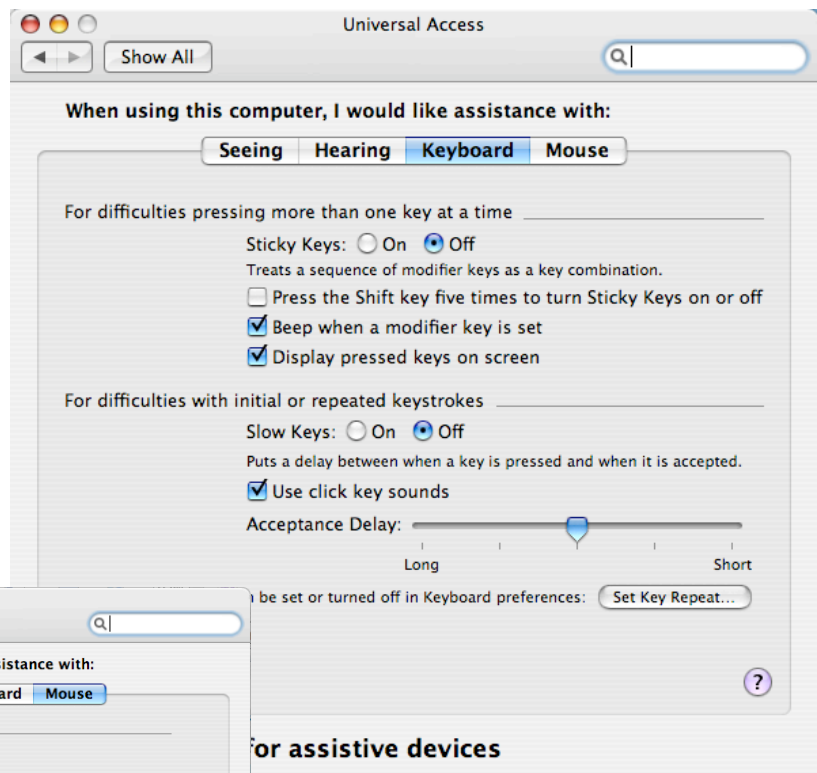
Hearing Options –

- Have visual warning of system event by going to **Universal Access** and clicking on **Hearing**.
- Click on **Flash the screen when an alert sound occurs**.



Mobility Options

- Do key combinations (like CTRL+ALT+DELETE) one key at a time
- Choose to have repeated keystrokes ignored
- Play sound when certain keys are pressed accidentally (CAPS LOCK, NUM LOCK, SCROLL LOCK)
- Choose left-handed mouse instead of right-handed
- Change speed of mouse pointer



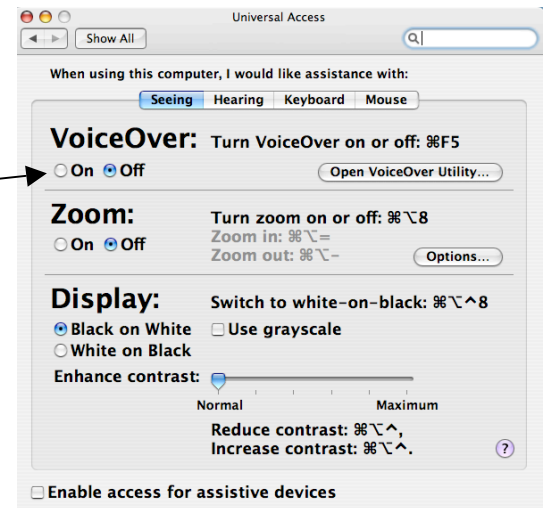
Voice-Over (Text to Speech)

VoiceOver is Mac's built-in screen reader.

To open turn Text to Speech on, click **System Preferences → Universal Preferences → Seeing → VoiceOver → On**

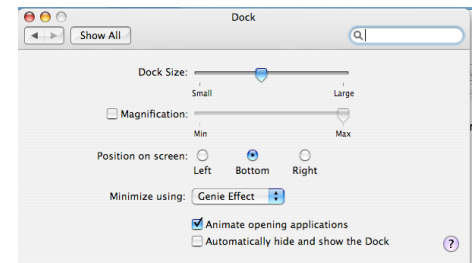
VoiceOver will read aloud what is displayed on your screen: text in documents, webpages, email; the contents of the active window, menu options, or the text you have typed.

- You can use **VoiceOver Utility** to customize VoiceOver to suit your needs. As simple to use as iTunes, VoiceOver Utility presents a list of nine categories, from General to Braille.
- VoiceOver is designed to work with Microsoft Office® Applications, System programs, Safari, etc.
- You can have new windows, menus, or shortcut menus read aloud when they are displayed.
- You can have typed characters read aloud.
- You can have the mouse pointer follow the active item on the screen.
- Mac OS X includes various male, female, and novelty voices you can use to speak a selection or text or an entire document. You can adjust the speed, volume, or pitch of the voice.
- A highly useful solution for those with cognitive disabilities, Text-to-Speech (TTS) technology allows them to hear a word as well as see it onscreen.



Dock Magnification

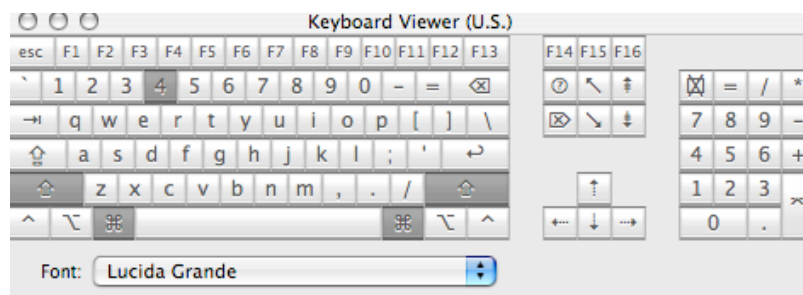
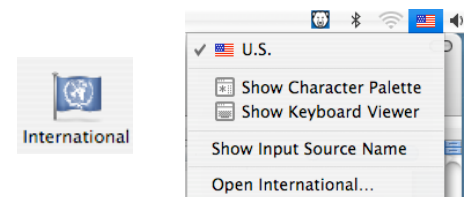
The dock offers a convenient way to access commonly used applications, files and folders. The Dock can become quite small if you add a lot of items. You can set the default size of Dock icons so they are easier to see by going to **System Preferences → Dock**



On-screen Keyboard

To open On-Screen Keyboard, click **Apple → System Preferences → International → Input Menu → Keyboard Viewer**

Then click in the upper right systems toolbar and select the US Flag icon and then **Show Keyboard Viewer**.



Note: The program in which you want to type characters must be active while you are using On-Screen Keyboard.

On-Screen Keyboard is a utility that displays a virtual keyboard on the screen and allows users with mobility impairments to type data using a pointing device or joystick.

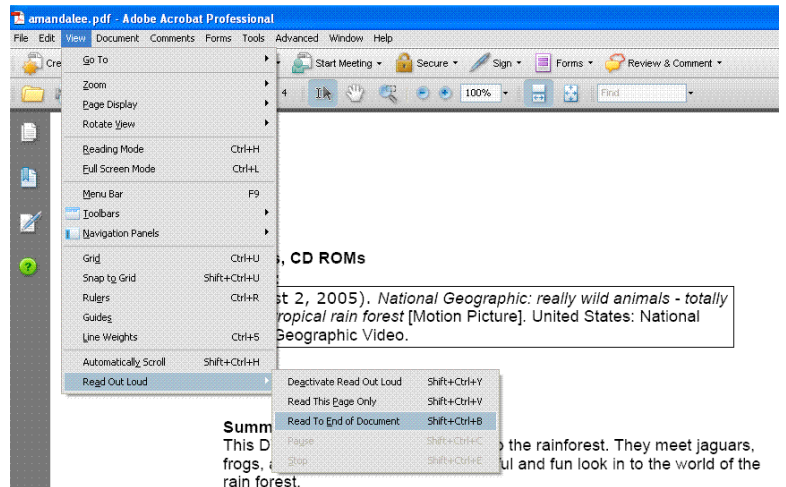


Adobe PDF – Mac® & Windows®

Adobe® PDF files (version 9)



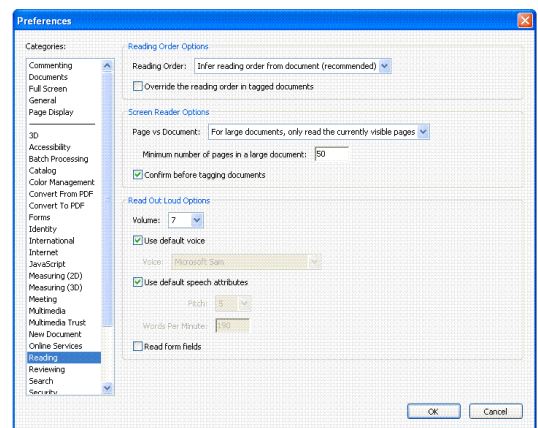
- Open **Adobe Reader**
- Open the .PDF file from within Adobe Reader than from within Internet Explorer from a web page link, so Adobe Reader menu bar is displayed
- Click on **View → Read Out Loud → Activate Read Out Loud**
- For more options, click on **View → Read Out Loud** to select **Read this Page only** or **Read to the End of the Document** or **Deactivate, Pause** or **Stop**



To change the type or speed of the voice used for reading back PDF files:

Windows®

- In Adobe Reader, → **Edit** menu, → **Preferences**
- 2/9/09 Adjust the settings under “Reading”
- Here you can change the voice used; there are 3 available (same as Windows); what to read and the volume.



Mac®

- In Adobe Reader, select → **Acrobat**, and then → **Preferences**
- Adjust the settings under “Reading”
- Here you can change the voice used; there are 3 available (same as Mac); what to read and the volume.

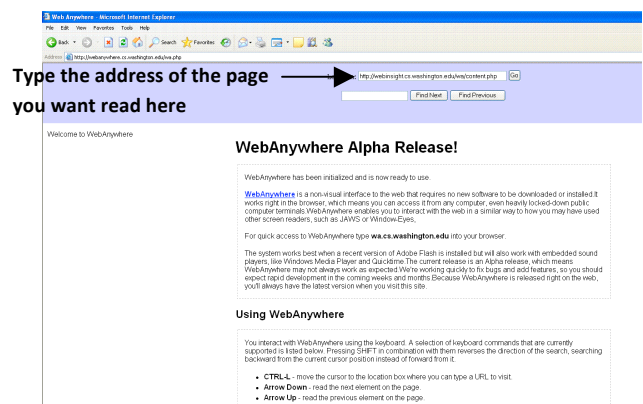
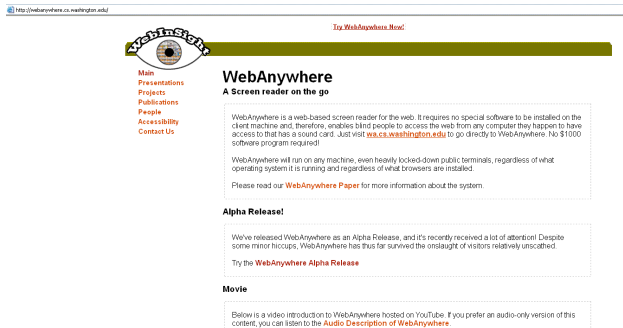
If you have an earlier version of Adobe Reader (assuming you have sound capability):

- Adobe Reader version 9 is freely available and can be downloaded from:
<http://www.adobe.com/products/acrobat/readstep2.html>

Free Web Page reader, WebAnywhere

<http://webanywhere.cs.washington.edu/>

Open the web page. In the WebAnywhere address bar, type the web address you would like to visit. Press enter. The page will be read for you.



For more general information on accessibility options:

Options include increasing text size, changing screen colors, adjusting keyboard and mouse settings

For tailoring the Windows and Web environment see:

- BBC website "My Web for Windows" http://www.bbc.co.uk/accessibility/win/sub_root.shtml
- Microsoft's accessibility site <http://www.microsoft.com/enable/>

For tailoring the Mac and Web environment see:

- BBC website "My Web for Mac" http://www.bbc.co.uk/accessibility/mac/sub_root.shtml
- Apple's accessibility site <http://www.apple.com/accessibility/>

Final Note: The accessibility tools that ship with Windows and Mac are intended to provide a minimum level of functionality for users with special needs. Most users with disabilities will need utility programs with more advanced functionality for daily use.